

**CONTAINS:
SEPTEMBER
1991 UNITED
STATES
CLIMATE
SUMMARY**

WEEKLY CLIMATE BULLETIN

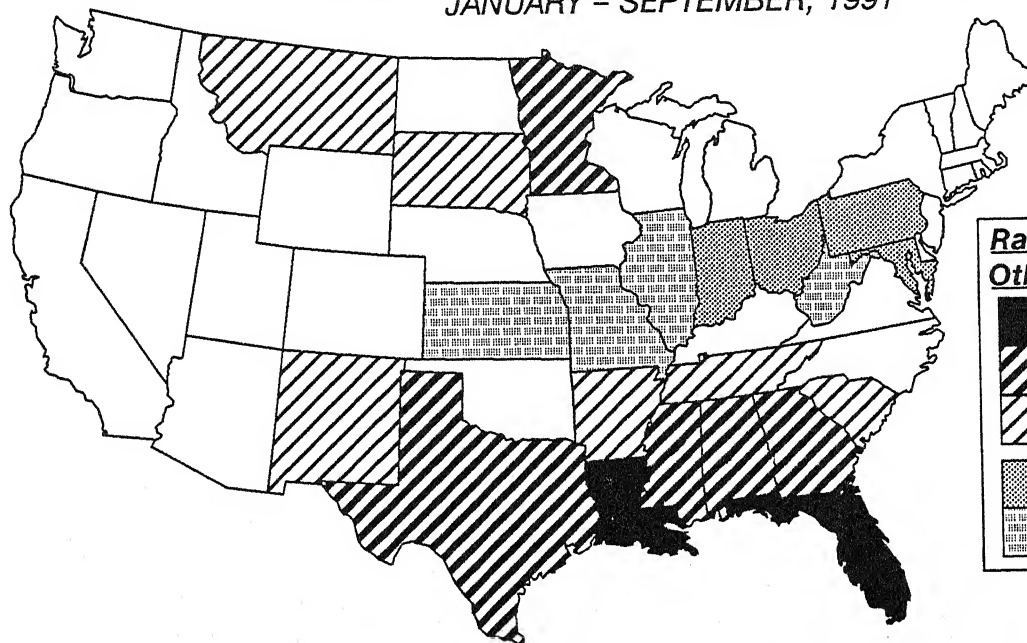
No. 91/40

Washington, DC

October 5, 1991

PRECIPITATION RANKINGS BY STATE

JANUARY - SEPTEMBER, 1991



Ranking With Respect to Other Jan - Sep Periods:



Wettest on Record

2nd - 10th Wettest

11th - 20th Wettest

2nd - 10th Driest

11th - 20th Driest

The first nine months of 1991 brought sharply contrasting precipitation patterns to the United States. Recurrent, heavy showers and thunderstorms in the Southeast, a wet monsoon season in the southern High Plains, and a series of spring and early summer storm systems through the north-central states combined to generate the wettest January - September period on record in two states [FL, LA], and one of the 20 wettest such periods in 11 others [AL, AR, GA, MN, MS, MT, NM, SC, SD, TN, TX]. In between the dampness farther north and south, a tranquil spring and summer helped create unfavorably dry conditions from the central Great Plains eastward to the mid-Atlantic. Four states [IN, MD, PA, OH] observed one of the 10 driest January - September periods since 1895 while four other states [IL, KS, MO, WV] experienced one of the 20 driest such periods in the last 97 years.

UNITED STATES DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE-NATIONAL METEOROLOGICAL CENTER

CLIMATE ANALYSIS CENTER



GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF OCTOBER 31, 1992

1. West-Central Alaska:

COLD WEATHER SHIFTS WESTWARD.

Temperatures averaged as much as 7°C below normal as daily lows dipped to -34°C at some locations. Farther east, near normal conditions returned to northwestern Canada and eastern Alaska [17 weeks].

2. Western United States:

WARM CONDITIONS SPREAD.

Warm weather overspread most of the nation west of the Continental Divide. Weekly departures reached +6°C in Texas [6 weeks].

3. Northern Europe:

BITTERLY COLD AIR REMAINS ENTRENCHED.

Most locations averaged 3°C to 13°C below normal for the third consecutive week. Lows dropped to -30°C in parts of Norway and Finland, with wind chills dipping below -40°C in some areas [3 weeks].

4. Southern Europe:

MORE MODERATE TO HEAVY RAINS.

Generally 50 to 155 mm of rain inundated the already-saturated region from western Spain eastward through Romania, although lesser amounts dampened northwestern Italy and extreme southwestern France. According to press reports, yet another round of flooding left thousands homeless in north-central Italy, with six-week surpluses approaching 375 mm [5 weeks].

5. Greece and Turkey:

RAINS BRING LIMITED RELIEF.

Moderate rains totaling 20 to 70 mm dampened much of northern and western Turkey; however, Greece and the remainder of Turkey received less than 20 mm of precipitation, and moisture deficits since mid-September ranged from 60 to 130 mm [30 weeks].

6. Eastern China:

VERY DRY CONDITIONS CONTINUE.

Little or no precipitation fell on most of the region, but isolated showers provided as much as 40 mm of rain to a few locations. Six-week moisture deficits of 60 to 170 mm were widespread across southeastern China [17 weeks].

7. Vietnam:

HEAVY RAINS ENGENDER MORE FLOODING.

Torrential rains of 90 to 320 mm, much of which fell as the second tropical cyclone in two weeks (Colleen) made landfall in east-central Vietnam, brought more flash flooding to the country. Weekly totals of 200 to 300 mm along the coast brought rainfall surpluses since mid-September into the 90 to 400 mm range, not including the rains from Tropical Storm Angela (Data were not available) [4 weeks].

8. South-Central Australia:

WET WEATHER RETURNS.

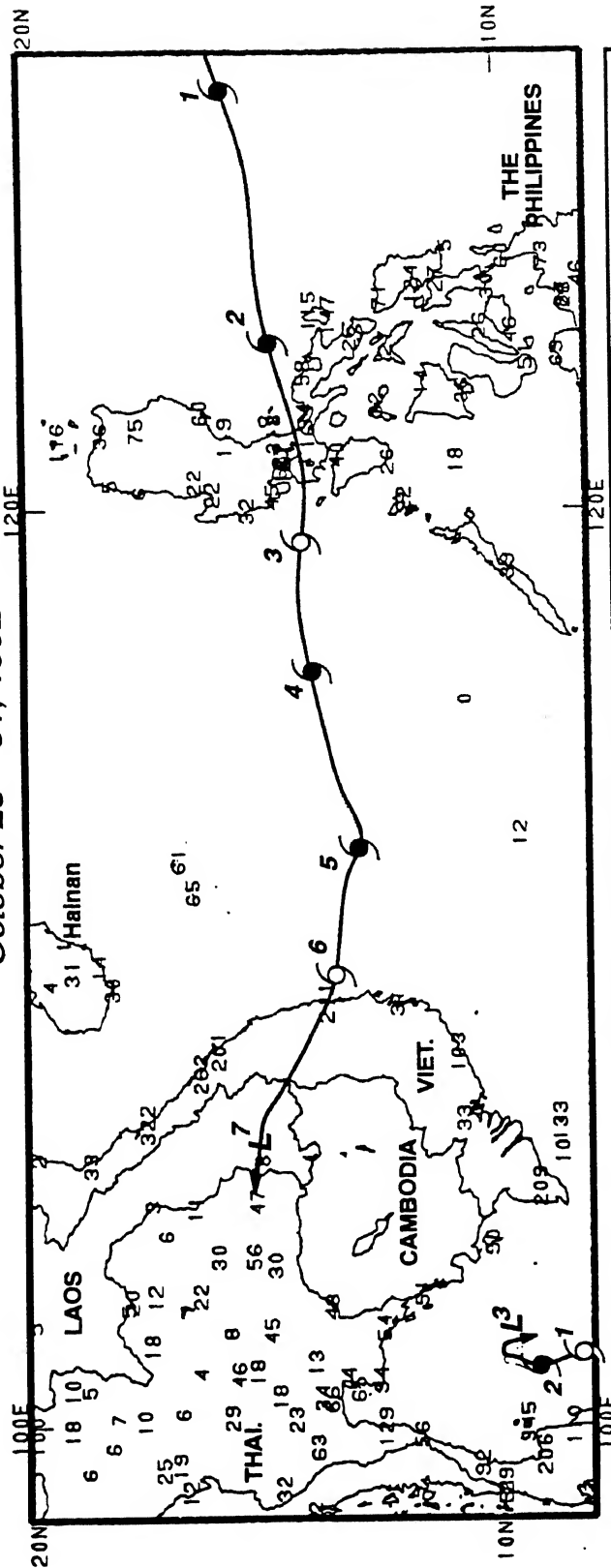
Moderate to heavy showers dumped up to 70 mm of rain on parts of the region after a brief break in the wet spell. Since mid-September, rainfall totals have been as much as 95 mm above normal [7 weeks].

9. Northeastern Australia:

LIGHT PRECIPITATION OBSERVED.

Most locations received less than 10 mm of rain; however, southern Queensland received as much as 20 mm of precipitation. Six-week moisture deficits ranged from 50 to 110 mm [6 weeks].

October 25 - 31, 1992



POSITIONAL INFORMATION ON TYPHOON ANGELA

POSITION	TIME AND DATE	STEADY WINDS (kts.)	GUSTS (kts.)	COMMENTS
1	1200 GMT, 27 OCT 92	40	50	Redeveloped after drifting through Vietnam & into Gulf of Thailand
2	0600 GMT, 28 OCT 92	65	80	Briefly reaches typhoon strength, begins weakening
3	0600 GMT, 29 OCT 92	30	40	Dissipates again

POSITIONAL INFORMATION ON TYPHOON COLLEEN

POSITION	TIME AND DATE	STEADY WINDS (kts.)	GUSTS (kts.)	COMMENTS
1	0000 GMT, 25 OCT 92	65	80	Becomes typhoon
2	1800 GMT, 25 OCT 92	75	90	Approaches Philippines
3	0600 GMT, 26 OCT 92	50	65	Weakens slightly and enters South China Sea
4	1800 GMT, 26 OCT 92	65	80	Regains typhoon strength
5	0600 GMT, 27 OCT 92	75	90	Maximum strength
6	0000 GMT, 28 OCT 92	60	75	Drops to tropical storm strength just before landfall
7	1800 GMT, 28 OCT 92	30	40	Dissipates

TWO TYPHOONS IN TWO WEEKS AFFECT SOUTHEAST ASIA. Two weeks ago, slowly-moving Typhoon Angela formed in the South China Sea and moved into central Vietnam while gradually weakening (not shown). According to press reports, the storm damaged thousands of hectares of crops, cut communication lines, and broke road and rail links across the country before tracking southward into the Gulf of Thailand. Then, the remnants of Angela reorganized last week into a tropical storm on October 27, moved slowly northward, and again dissipated after briefly re-attaining typhoon strength. Heavy rains fell in extreme southern Thailand as a result of Angela's proximity. Weekly totals reached 245 mm, with daily amounts of up to 152 mm drenching some locations. Farther north, Typhoon Colleen quickly developed in the Philippine Sea and drifted westward, passing through southern Luzon during October 26 with winds gusting to 90 knots. Colleen moved quickly through the Philippines, dropping anywhere from 50 - 200 mm of rain on Luzon during the first two days of the week. According to press reports, schools, some government offices, numerous businesses, and the Manila Stock Exchange were forced to shut down because of widespread street flooding and a few landslides. In addition, rains from Colleen generated renewed flows of lahars (a mixture of volcanic ash and mud) near Mt. Pinatubo, threatening three villages near the volcano. Later in the week, Colleen became the second near-typhoon to hit central Vietnam during the last ten days of October as it moved inland on October 28. Daily rainfall of 120 - 240 mm soaked the region during October 28 and 29, producing another round of flooding.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF OCTOBER 25 – 31, 1992

The last full week of October featured a major winter-type storm in the western U.S. Heavy rain soaked the northern half of the West Coast while snow blanketed the northern Sierra Nevada and Cascades. More than 4 inches of rain soaked both Kentfield and Napa, CA while up to 30 inches of snow fell in western Nevada near Lake Tahoe. In sharp contrast, summer-like heat baked portions of the southern Plains and lower Mississippi Valley. More than a dozen record daily highs were established as readings soared into the nineties. In addition, strong thunderstorms erupted across parts of Texas and Louisiana, generating heavy rain, hail and strong wind gusts. Thunderstorm wind gusts damaged a building and downed trees near Hawkins, TX on Thursday. Elsewhere, heavy snow and bitter cold gripped parts of Alaska. Up to 2 feet of snow blanketed the mountains near Anchorage, AK while sub-zero lows were observed in the northern and central parts of the state, yielding several record daily lows. The mercury plunged to -30°F and lower at Bettles, AK on both Friday and Saturday and the highs for the same two days remained below zero.

The week began with relatively tranquil conditions across most of the contiguous U.S. A low off the north Atlantic coast spread rainshowers across eastern New England on Sunday while light snow blanketed parts of New York and Vermont. The trailing cold front stretched southward along the East Coast and curved inland through the south Atlantic and westward to the southern Plains where it stalled. To the south of the front, unseasonably warm weather prevailed. Nearly a dozen record daily highs were set on Sunday and Monday in Texas, Louisiana, and Arkansas as readings soared above 90°F . Farther north, unusually cold conditions settled into the eastern U.S., producing freezing temperatures as far south as the Tennessee–North Carolina border and a record daily low of 28°F at Parkersburg, WV on Monday. Farther west, isolated strong thunderstorms dumped brief, heavy rain on northern California. Hayfork, CA was deluged with up to 1.50 inches of rain in fifteen minutes on Tuesday. In Alaska, a storm system generated heavy snow and rain across the southern sections. Up to 20 inches of snow fell at the Tahetna Pass Lodge while 4 inches covered Anchorage.

During the last half of the week, a strong low moved onshore in the Northwest, spreading heavy rain and mountain snows from Washington to northern and central California. Several locations in northern California reported more than 3 inches of rain while more than two feet of snow blanketed the northern Sierra Nevada. Farther east, another low generated wintry conditions in the northern Rockies and Plains. Up to 6 inches of snow accumulated at Salt River, WY while a mixture of precipitation coated the western Dakotas. Meanwhile, strong thunderstorms battered the southern Plains and deep South, causing minor damage.

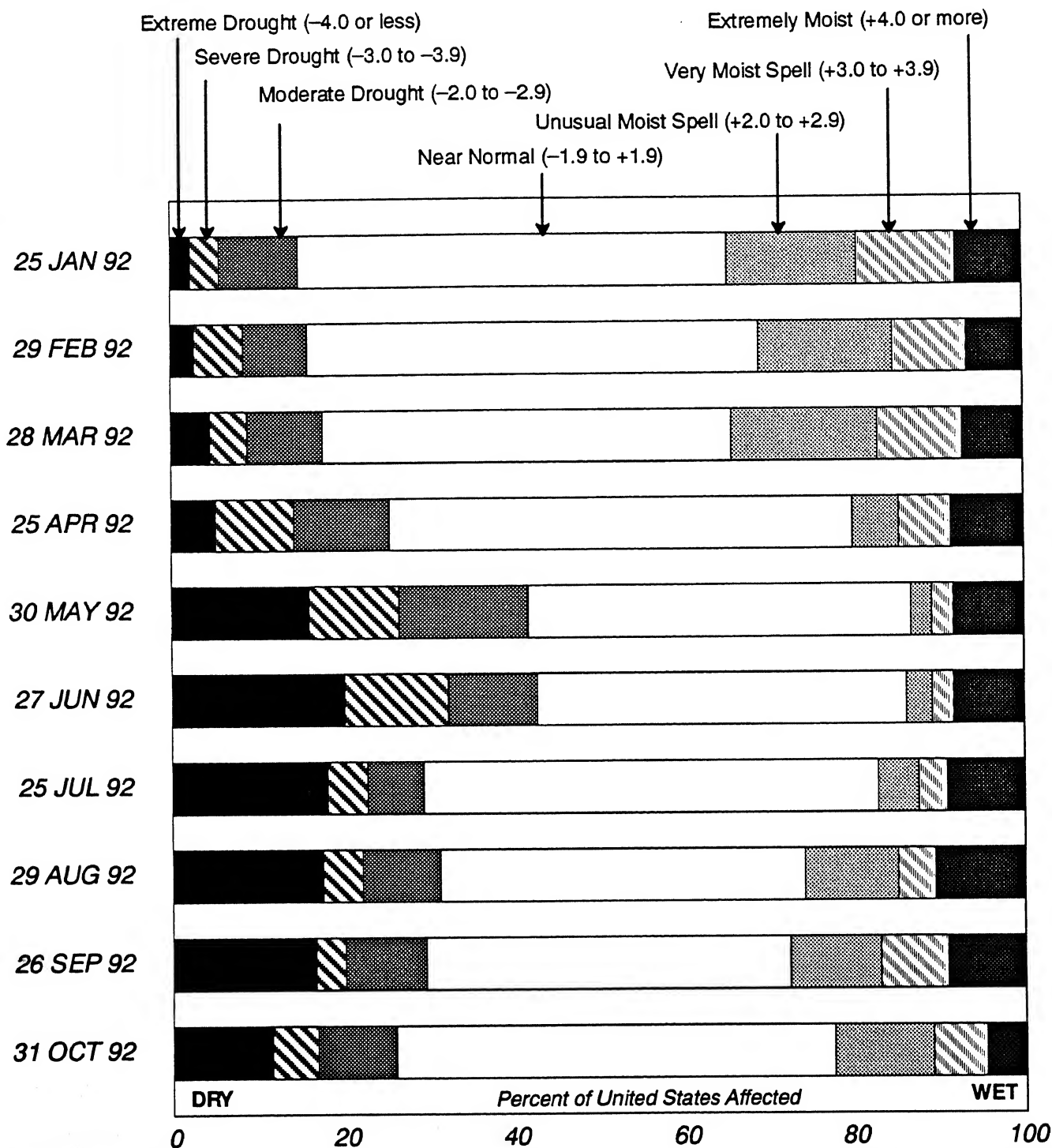
According to the River Forecast Centers, the greatest weekly precipitation totals (more than 2 inches) fell on the northern two-thirds of the West Coast, the eastern halves of Kansas, Oklahoma and Texas, the southern half of the Mississippi Valley and scattered locations in the mid-Atlantic, Tennessee and Ohio Valleys, the Intermountain West and southeastern Alaska. Light to moderate amounts were measured in western and northern New England, across most of the deep South, the central Plains and Rockies, the southern two-thirds of Alaska, eastern Hawaii and the remainders of the mid-Atlantic, the Ohio and Mississippi Valleys, and the West. Little or no precipitation occurred in southern New England, across most of Florida, western Texas, the Great Lakes, and the remainders of Alaska and Hawaii.

Unseasonably warm weather dominated the southeastern quarter and the western half of the contiguous U.S. Weekly departures between $+7^{\circ}\text{F}$ and $+11^{\circ}\text{F}$ were common across the deep South, the southern Plains and Rockies, and the southwestern quarter of the nation. Departures of $+3^{\circ}\text{F}$ to $+6^{\circ}\text{F}$ were observed in the mid-Atlantic, the northern and central Plains and Rockies westward to the Pacific Northwest. In Alaska, warmer than normal conditions were confined to the southeastern third of the state where temperatures averaged up to 5°F above normal at several locations.

Abnormally cold conditions were limited to the northeastern quarter of the country. Weekly departures between -3°F and -6°F were common from the upper Midwest to the Northeast. In Alaska, unusually cold weather dominated western and northern sections with weekly departures to -13°F reported at Unalakleet.

PERCENT OF UNITED STATES AFFECTED BY A WET SPELL OR DROUGHT, BASED ON THE PALMER INDEX

January through October 1992

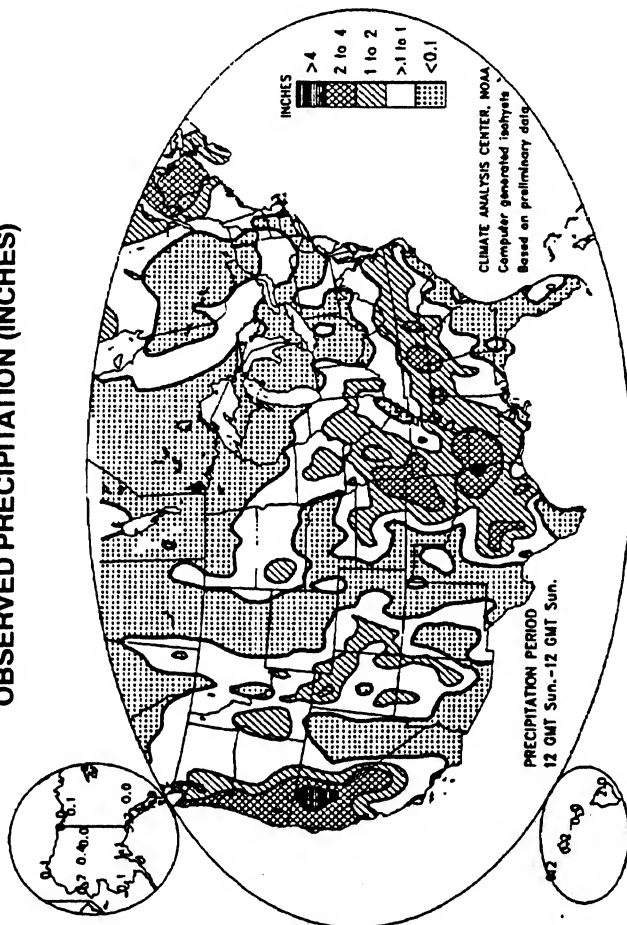


Percent of Area Affected by Wet Spells and Drought. Based on a preliminary Palmer Drought Severity Index at -4 , -3 , -2 , $+2$, $+3$, and $+4$, computed by climate divisions. Dry conditions are on the left and wet conditions are on the right.

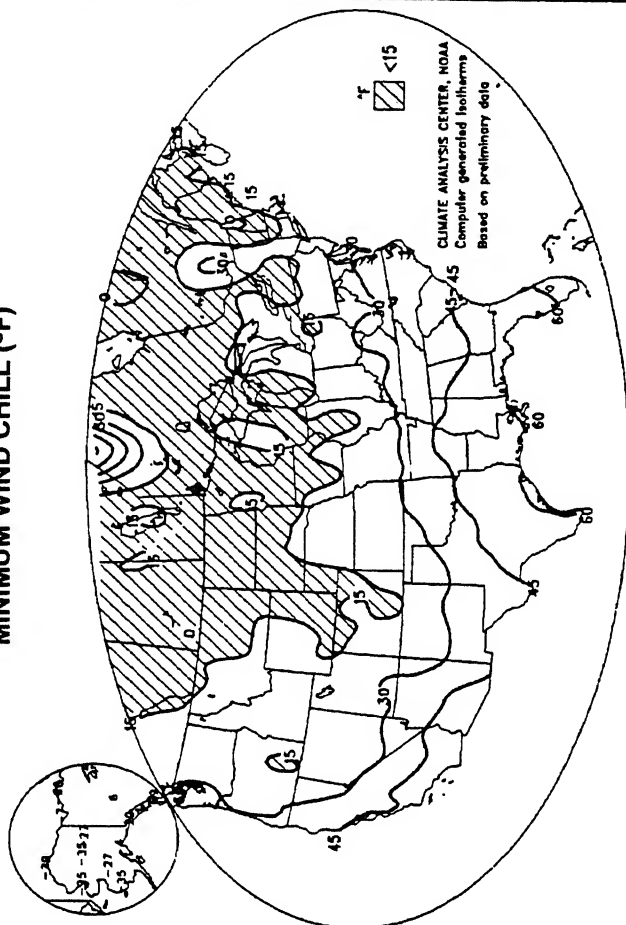
Climate Analysis Center, NOAA

UNITED STATES WEEKLY CLIMATE CONDITIONS (October 25 – 31, 1992)

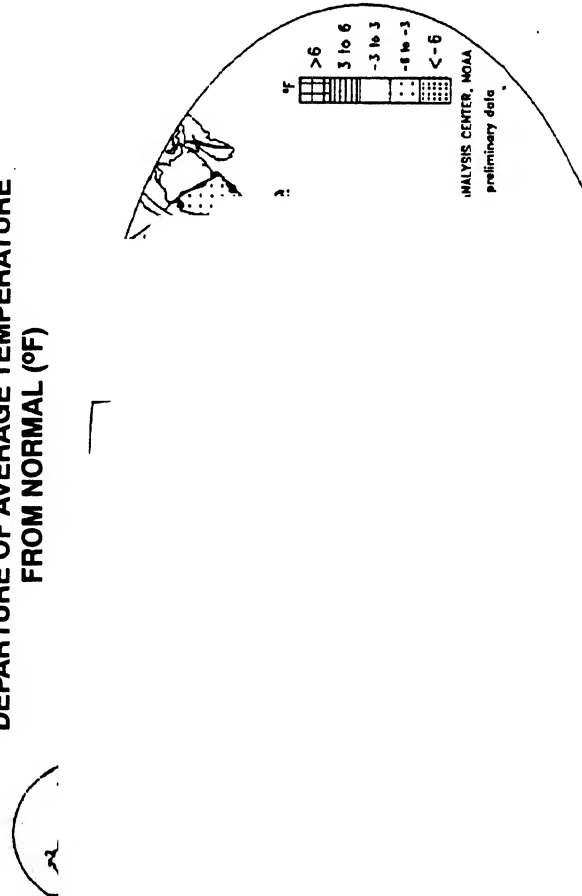
OBSERVED PRECIPITATION (INCHES)



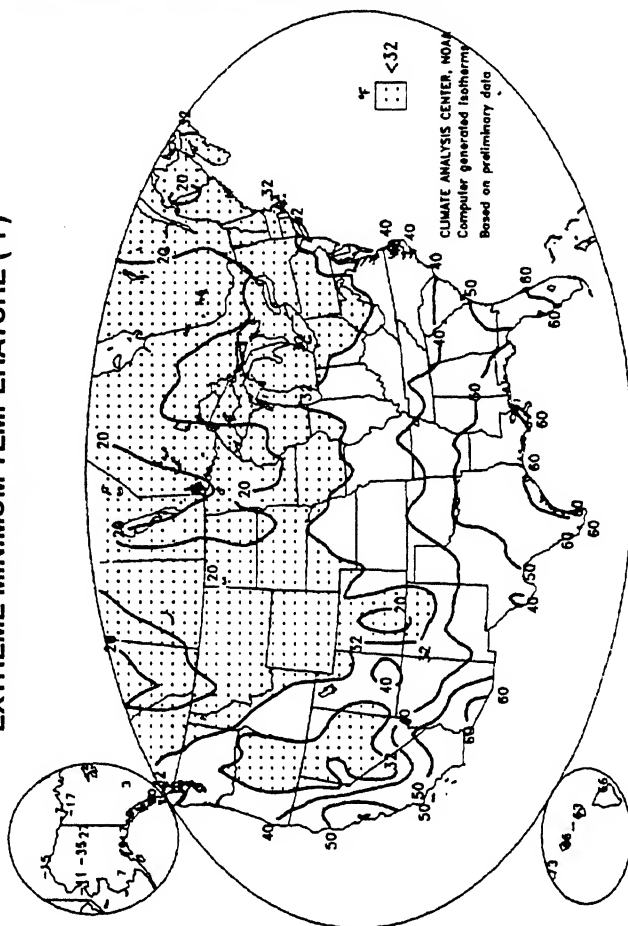
MINIMUM WIND CHILL (°F)



DEPARTURE OF AVERAGE TEMPERATURE
FROM NORMAL (°F)

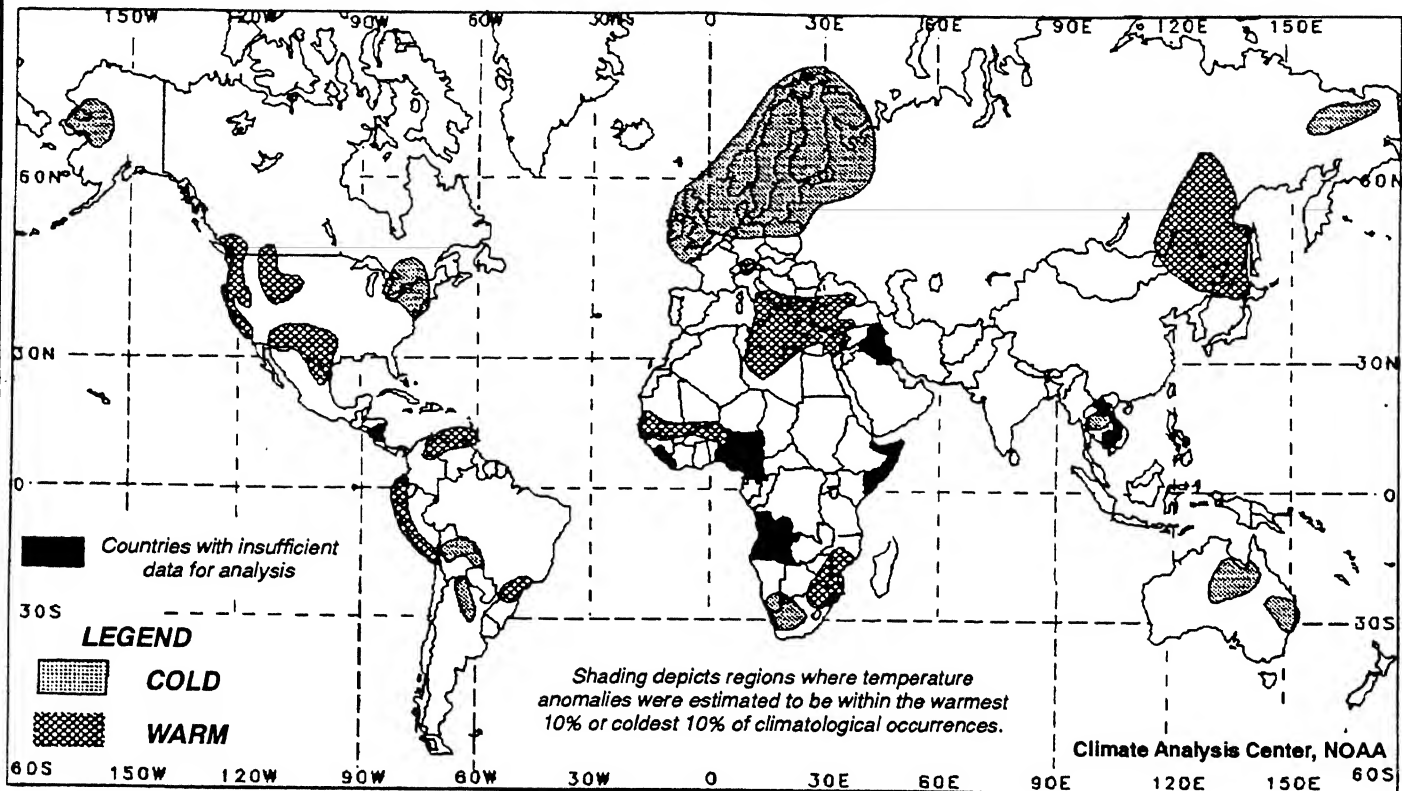


EXTREME MINIMUM TEMPERATURE (°F)



TWO-WEEK GLOBAL TEMPERATURE ANOMALIES

OCTOBER 18 – 31, 1992



FOUR-WEEK GLOBAL PRECIPITATION ANOMALIES

OCTOBER 4 – 31, 1992

